

M · R · A · C HAMATEUR CHATTER



Bulletin of the Milwaukee Radio Amateur's Club, Inc.
The World's Oldest Continuously Operating Radio Amateur Club.

Volume I - Number 4

W9RH

May, 1950.

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MEMBERSHIP ISSUE

For the first time in the history of the Milwaukee Radio Amateur's Club, Inc., a country-wide membership campaign is being launched this month, it was announced by president Ralph Koenig, W9RUF and membership chairman, Clarence Burke, W9KEU.

Our organization, the World's oldest continuously active radio amateur club, has entered its thirty-third year of activity, being founded in January 1917 by L. S. H. Baird and other local amateurs. The club became affiliated with the American Radio Relay League in December, 1919. It meets every Thursday of the year except during the months of June, July and August.

We would like to see every amateur in Milwaukee County a member of MRAC. We believe we have a program of activities which coordinate the highest values in amateur radio. Spreading technical knowledge by our members....arranging suitable speakers on topics of interest to our group and displaying of films for educational and entertaining purposes are a part of the club's routine. Helping the newcomer in amateur radio predominates the virtue of what this club stands for.

The necessity for belonging to a radio club is obvious especially at this time when many new obstacles are appearing in our path. Our officers and directors are working hard for amateur radio and this alone should beckon to every non-member to become a part of the club---WHERE THERE IS UNITY THERE IS STRENGTH---

You will find an application blank printed in another part of this publication. Please fill it out and send it in today, what say? Would like to see you enrolled when our fall meetings start in September.

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De Forest Prefers Hamming.

(The following is a copy of a letter received from Mr. De Forest)

Hollywood, 46, Calif., May 2, 1950

Upon my return here from 5 delightful weeks in Hawaii I find your welcome and interesting letter from the Milwaukee Radio Amateurs' Club, dated March 21st.

In Honolulu I had the pleasure of addressing some 300 radio amateurs. I outlined briefly the story of the evolution of the triodetube, from its first conception in 1900, up to its first demonstration as an amplifier to Western Electric and A. T. & T. engineers in 1912. The "hams" listened most interestingly.

Later I had a startling demonstration of what the tube can do when I talked in Honolulu to a friend in his auto on the road near Phoenix, Arizona - at 11 A.M.--on 11 meters.

This impressed me more than did my regular telephone talks from Honolulu to Chicago via the "Inter Island Radio Telephone"--A. T. & T. service on the mainland, via San Francisco.

With every good wish to the Milwaukee Radio Amateur's Club--

"73"

Lee de Forest

FLASH!!

CALLING CQ TO ALL 25 w.p.m. HAMS-----On May 21st, the secretary of defense, the Honorable Louis A. Johnson will broadcast a special greeting to all amateurs. Those copying the message without errors will receive a Certificate of Merit. The transmission will emanate from the following stations:

ARMED FORCES DAY RECEIVING COMPETITION

20 MAY 1950

TIME

NSS Wash-	0200 GCT (2100 EST)	122, 4390, 9425,
ington	0400 GCT (2300 EST)	12630, 17000 kc
NPG San	0400 GCT (2300 PST)	115, 4390, 9255,
Francisco	(2000 PST)	12540 kc
WAR Wash-	0200 GCT (2100 EST)	3497.5, 6997.5,
ington	0400 GCT (2300 EST)	14405, 20994,
		27994 kc

Send your copy to Armed Forces Day Contest, Room 5 B 519, The Pentagon, Washington 25, D.C. postmarked before midnight May 30th, 1950. Include your full name, station call, mailing address, and the time you copied the message.

M R A C

HAMATEUR CHATTER

Published Monthly by the
Milwaukee Radio Amateur's
Club, Inc., in the interest
of the membership and
Amateur Radio.

OFFICERS

Ralph Koenig, W9RUF....President
Fred Zolin, W9ONY.....Vice Prest.
Art Vahovius, W9VSO....Secretary
George Bowen, W9DWI....Treasurer

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BUSINESS MANAGER

Joe Collins, RR 2, Lake Shore Drive, Thiensville, Wisconsin,
Phone 4515

RESUME OF MRAC'S GUEST SPEAKERS FOR APRIL AND MAY

J. B. Holtz and H. E. Moore, of Centralab, Milwaukee, gave a very interesting talk on ceramic capacitors, printed circuits and their application. Three dimensional colored slides were shown during the lecture. Special glasses were furnished by the David White Company, necessary for this type of projection.

J. H. Morin, of Shure Bros. Inc., Chicago, spoke on the subject of microphones, construction, theory of operation and various applications and phonograph pickups.

L. W. Butler, of the Wisconsin Telephone Co., Milwaukee, presented "Stepping Along With Television." His address was timely covering communications during the last 100 years. Herb Zwarra, W9MQA, from the same company assisted in showing the slides.

Webster Soules of Electro-Voice, Inc., Buchanan, Michigan, delivered an exceptional address on speech amplifiers, clipping and microphones. Demonstrations were given with all types of microphones. The most startling exhibition was that of the differential microphone used in U. S. Army tanks. This type has two vents on the sides of the mike which cancels out the loud noises and only responds to light sounds directed straight into the portion near the mouth.

Soules QTH is Chicago and operates station W9DCM

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TALK OF THE CLUB

THE 3RD. ANNUAL V. H. F. SWEEPSTAKES CHALKED UP SEVEN MRAC MEMBERS---W9UJN, W9TQ, W9JPK, W9PYM, W9AFT, W9BTQ, AND W9FES. THE CONTEST ALMOST RAN TO 400 ENTRIES WHICH WAS MORE THAN DOUBLE THE FIRST EVENT. (SEE PAGE 52 APRIL QST)....

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NOT LONG AGO WE ENJOYED THE PRESENCE OF GEO. HOFFSTETTER, W9JC (JUNK COLLECTOR), AT ONE OF OUR MEETINGS WHO SPOKE ON W. U. CARRIER SYSTEMS. HIS CONTRIBUTION TO QST, APRIL PAGE 54 A POEM "PROGRESS OF A HAM"....IS WORTH READING.

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AL HENNING, W9ESJ, MADE THE PRINT IN THE "BRASS POUNDERS LEAGUE" UNDER TRAFFIC NOTES IN APRIL QST, PAGE 70. AL IS ONE OF THE OLD FAITHFULS ON THE "BEN"-----WE SHOULD HAVE MORE LIKE HIM.

Al also placed ninth in the 16th sweepstakes contest, phone section.

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NICE BRASS POUNDING

The final results of the 16th Sweepstakes contest, CW section, gave the highest honors in the Central Division to Reno W. Goetsch, W9RQM, S. C. M., Wausau, Wisconsin. He piled up a brilliant score of 152,600 points.

Art Vahovius, W9VSO, Secretary of MRAC, was second with 145,018 points, and Russell Greenwood, W9LVR, MRAC member, scored 137,160 points, which put him in third place. Harry Paston, W9DJV, MRAC member and assistant secretary A.R.R.L., piled up 102,091 points which was seventh highest. Other MRAC members turning in scores were: W9GIL, W9RKP, W9DR, W9RH and W9MDG.

There were 925 CW contestants in this sweepstakes in which W9RQM ranked seventh highest; W9VSO placed eleventh and W9LVR tied for sixteenth position.

The MRAC boys did a beautiful job and we want to congratulate them.

GLAD YOU'RE BACK

Herb Wareing, W9NY, who has been on the sick list for a long time, has returned to his post in charge of radio for the Milwaukee Police Department. Stay well Herb and hope you can make the club some Thursday.

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"REEL" INTEREST SHOWN.

Associate member, Gerald Clouser, is the club's moving picture operator and he really enjoys doing it. We take pride in the spirit shown by this member, he is a new member. Gerald is working hard to get his ticket - is a junior at Rufus King high, also attends Vocational School two nights a week studying electronics.

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TVI MEETING - BIG SUCCESS

TVI, nicknamed Tennessee Valley Indians out east, was expounded by Don Merten, W2UOL, member of MRAC, at the Patio, March 17, where over a hundred "HAMS" gathered. Don imparted some excellent knowledge on the theory of TVI and backed them up by demonstrations. The meeting was sponsored by Radio Parts, Inc., Milwaukee.

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OUR FOUNDER - - Dr. L. S. H. Baird

LL. B., M. SC., PH. D., N.D.

MRAC was very happy to receive a large photograph of our founder, ex-W9HO, who was kind enough to send it to us. The PIX was passed around at a recent meeting and then displayed at the officers table. Baird's mother attended one of our meetings while visiting in Milwaukee, and extended best wishes to us from her son. She was happy to state that Fred Catel, W9TDK, visited them in Phoenix, Arizona, enroute to California.

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IMPORTANT MEETING MAY 18th

Election of officers and directors will be held Thursday, May 18th in the conference room of the Public Library.

The importance of this meeting is significant since the destiny of any organization is measured by the type of people you elect to guide it. With this thought in mind, you SHOULD ATTEND.

We think it wise before nominating any one to be assured by him that he is willing to accept. If he is agreeable to accept, then he understands the obligations vested in him should he be elected. It is very important that all officers and directors be in a position to attend all meetings so that any business for the good of the club receive proper consideration.

DON'T FAIL TO DO YOUR DUTY

"FRINGE HOWL"

by

Edgar W. Bailey, W9TFD.

Running up and down the 75 meter fone band last week, searching for a clear channel in which to park my weary 100 watt signal, I heard a well modulated voice say "This is W5---, broadcasting to SWL's". Now there is a fellow who has the right idea. He is going to bring a lot of new members into the fraternity, just by taking a little time for those who haven't got the ticket yet, and manifesting interest in their problems. Which brings me to the theme of this article.

We are proud of our great amateur brotherhood--justly proud-- of its spirit, and its accomplishments. But I do believe that we tend to forget that it is almost an axiom of life that whatever ceases to grow will soon die. Therefore, we should encourage in every way those who appear to be good prospective amateurs, and there are plenty, if we just look for them. We need to become active salesmen for the good of the order.

There is an old story about a town in Missouri, where the meanest man in the village had just passed away. At the funeral it was customary for friends of the deceased to rise and give testimony as to their grief,, and the great loss they mourned. When the preacher reached this point, not a soul stood up. There was a most embarrassing silence; finally, a voice was heard: "Well, neighbors, if you aint goin' to say nothing, I'd like to take this time to invite you all to see the new Buick, on display in my show-room on Main Street". (apologies to W9GPI)

Now I do not mean to say that we should go out and try to persuade Grandpa and Uncle Mike to become amateurs; we ought to concentrate on the kids. And where are they? They are in schools. Yet there are mighty few amateur organizations that are actively working with and through the schools to promote radio and electronics. There are plenty of special interest groups, with axes to grind, who will send the kids comic books, tickets to the movies, etc., etc., but we amateurs, who can offer both a vocation and a hobby, all "for free", let them take the play away from us.

At Shorewood High School, where I work, a radio club was organized many years ago by W9HWO. Over the years, the club has added thirty or more new members. We have several almost ready for the exam this year. Now there are about a thousand High Schools in Wisconsin alone. Suppose one tenth of these became active, and added one new member each year. Suppose further, that the movement was nation wide. It is easy to see that our ranks would be doubled in less than ten years.

You, as an amateur, have influence in your community. You may even be on a school board. Why not use your influence to promote ham radio in the schools? You will do yourself a service, as well as promoting the welfare of your community, your school, and your country. Then when some misguided politician proposes to limit the amateur bands to 10 Kc and five watts power, a hundred thousand hams can raise enough fringe howl to throw even the FCC into a state of parasitic oscillation!

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Sales Representative

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2 - Gon-Set Noise Clippers	8.25
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4 - Lysco Noise Limiter	4.50
5 - Lysco Mobile Xmitter	23.95
6 - Lysco Miniature VFO for Mobile Use	27.95
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All Band Antenna with one Coil	7.95

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KITS

1 - Eico Kits	VTVM Kits	\$ 23.95
	RF Signal Gen. Kits	19.95
	5" Scope Kits	39.95
2 - 5 Tube Coronet Superhet Receiver Kits		11.95

WATCH NEXT ISSUE FOR INDUSTRIAL,
FM, AND TV ITEMS OF INTEREST TO YOU!

RADIO PARTS CO. - W9QUN.

SENATOR ALEXANDER WILEY PRAISES M. R. A. C.

It might interest you to know that the Honorable Senator Alexander Wiley is very much interested in hobbies, especially amateur radio.

He was very much pleased with the interest shown by the club in the Armand Schultz case and we are quoting below excerpts of a letter just received from him:

"*****I do want you to know how grateful I am for the very generous message which you have conveyed on behalf of the Milwaukee Radio Amateurs' Club*****"

You are to be congratulated for bringing Armand Schultz' need to the attention of radio hams of this nation and of the World.

The magnificent response by radio hams is but one more evidence of the fact that the folks who follow your hobby are among the most civic-minded Americans with which this nation is blessed. I cannot express too highly my commendation of amateur radio operators of Wisconsin and of our nation. You have compiled so brilliant a record, particularly in times of disaster that for me to cite chapter in verse of all your many achievements would merely be repetitious.

The role of amateur radio operators in World War II is particularly a source of deep pride, I am sure, to you and to all of the other folks engaged in this vital work*****"

(signed) Alexander Wiley

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Through the efforts of the senator, Armand Schultz is now at the Wisconsin General Hospital, Madison, Wisconsin, where he is receiving additional treatment for leukemia.

We are happy to receive some Congressional Record reprints written by Senator Wiley captioned "Happy Hobbying in Wisconsin". His expression of amateur radio is contained therein and is an excellent one, indeed, and we reprint herewith:

HOBBYISTS PERFORM VITAL INTERNATIONAL AND
EMERGENCY DUTIES.

Few folks need to be told how hobbyists aid Uncle Sam in times of war, during civilian emergencies and disasters and in other national and international matters. Thus, it is a generally accepted fact that the technically able "hams" or amateur radio operators formed the backbone of the armed services radio corps. So valuable were their services during the war that a Military Amateur Radio System (MARS) has been established as part of the National Guard, the ROTC, and the Organized Reserve Corps, vital elements of our present peacetime military program.

Another great service performed by hams is for no less a vital organization than the United Nations. Through the fine medium of the International Amateur Radio Union, hams have been relaying United Nations news bulletins around the world. Over 2,000 hams are signed up as UN Amateur Radio Aides. Through the use of K2UN, the United States Amateur Station at Lake Success, they keep the airways humming 6 to 8 hours a day with vital international messages. As if these two national and international contributions were not sufficient, hams are also of great help in times of national emergency and disaster, such as flood, earthquake, typhoon or tornado, and so on. Many a life has been saved by the Johnny-on-the-spot ham who sent urgent messages for help over his radio outfit.

Any Hams desiring the complete reprint "HAPPY HOBBYING IN WISCONSIN", please write the senator who will be more than pleased to mail them to you.

"HAM" STATION BIG HIT AT HOBBY SHOW

Joe Stevens, W9GAH, set up a portable station at a hobby show sponsored by the West Allis Masonic Lodge, 76th and National, April seventh, and created a whale of interest to the 200 people who were present.

He used the transmitter owned by Wm. J. Birch, W9PNC, running about 22 watts. Les Thelaner, W9HDW, furnished the receiver. A 300 ohm dipole (folded) antenna, strung up on the high part of the hall, was used. Some of Joe's contacts were: W9GSP, W9SKF, W9EBG, W9KSP and W9FDX.

Stevens exhibited with his 420 MC transmitter, which is a table top demonstrator, the affect of signals to a TV antenna. A small sheet of tin foil was used to illustrate the interference caused by aeroplanes. The results of which was visible by using a milimeter. He also showed why straight line transmissions to the antennas were necessary for best reception of VHF signals.

Not only did W9GAH give a good technical show, but also acted as good will ambassador to many folks who had been getting interference from HAM stations. He suggested that the amateurs calls be given to him and he would see to it that something would be done to eliminate their TVI.

SUMMER SKED!!

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7410 KC xtals For 10 Meter Mobil Band
PE-103's (used) - COAX-RG 8/U 5¢ Per FT.

W9SYT

BEST OF 73's

W9SIZ

MONITORING 3950

WELCOME - NEW MEMBERS

The following members have joined the MRAC since last September, 1949.....
The Officers and Directors welcome you. There is strength in numbers,
but remember the club's progress is measured as each and every member
contributes to and participates in our activities - Let's hear from
many, not just a few.

Joseph R. Harkness, W9GZR, 2773 N. 84th., St., Milwaukee.
John E. Kremers, W8IBW, R 2, Box 6, Waukesha.
Arthur L. Couture, Associate, R 2, Box 202, Milwaukee 15
Alfred C. Rosenau, Associate, 1823A W. Vliet St., Milwaukee 5.
Royal D. Miller, W9CJO, 1920 N. 27th. St., Milwaukee
Gerald Bergmann, W9IDW, 1223 N. 46th. St., Milwaukee.
Gerald Clouser, Associate, 4985 N. 26th. St., Milwaukee 9
Donald J. McNamara, W9EKM, 829 N. 12th. St., Milwaukee.
Danny P. Cosgrove, W9GIN, 1431 N. 122nd. St., Wauwatosa, Wis.
S. B. Neff, Associate, 505 N. 31st. St., Milwaukee
Robert J. Allen, W9GIR, 1231 N. 120th St., Wauwatosa
Howard Timm, Associate, 3523 N. 14th. St., Milwaukee 6
Charles Wittkop, W9GLA, 2013 N. 47th. St., Milwaukee 8
Robert Immekus, W9CYI, 5011 N. Idlewild Ave., Milwaukee 11
Alexander L. Krososny, W9KHE, 2067 S. 78th St., West Allis, 14.
Raymond A. Thompson, W9IRZ, 3546 N. Oakland Ave., Milwaukee 11
Arnold J. Redlich, W9FBT, 2214 W. Vine St., Milwaukee.
Howard R. Schultz, W9MFB, 3914 W. Hampton Ave., Milwaukee 9

Frank Schachtely, W9IFS, 606 S. 94th Place, Milwaukee 14
Kennett Kramer, Associate, 132 LaSalle St., Waukesha, Wis.
Jerome I. Greenblatt, Associate, 700 W. State St., Milwaukee 3
Edgar W. Bailey, W9TFD, 3908 N. Frederick Ave., Milwaukee 11
August C. Piechowski, Associate, 1611A W. Beecher St., Milwaukee 15
Armand Schultz, Associate, 2916 S. Lenox St., Milwaukee 7
J. C. Leissring, Associate
Wm. H. Radermacher, W9RFN, 1217 S. 103rd. St. Milwaukee
Lowell W. Koepf, W9HIF, 4135 N. 72nd St., Wauwatosa, Wis.
Vernon L. Fabishak, W9HDE, 1362 S. 72nd. St., West Allis 14, Wis.
Norman K. Brushaber, 2441 N. 18th. St., Milwaukee 6, Wis.

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Any new member whose name does not appear above please notify the
treasurer.

All paid up members should have their membership cards. Due to a mid-
year change of club treasurers, it is possible some cards went astray.
Please notify the treasurer if you don't have your card.

Put this list in your roster.

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WISCONSIN SECTION MEETING AT WAUSAU, WISCONSIN

Great interest was shown at the Wisconsin Section meeting, held April 15th, at Wausau, Wisconsin, by a registration count of 76 hams from all over the state.

Section EC W9YYY and Assistant Director W9PYM, both directors of the MRAC, represented their club and made the following report:

The object of this meeting was to stimulate closer relationship between the various net groups and emergency coordinators, and this was accomplished by personally meeting each other after carrying on operations by short wave for some time. Cooperation between the phone and CW nets provides extensive coverage of the traffic for the state of Wisconsin. SCM, Reno Goetsch, W9ROM, who called the meeting to order, stated that the League's appointments are doing a good job and are showing the proper interest to promote HAM RADIO in its various functions. W9ESJ reported on the Badger Emergency Net and likewise W9UNQ for the WIN. 10 EC from the various parts of the state were present.

The subject of the State Council of Radio Clubs was brought up by W9FMH, Assistant Director of the Central Division, who at this time took over as chairman of the meeting. He stated that such a group would help materially for the advancement of Amateur Radio. The wishes of the amateurs could be gotten more completely through a state council and at the same time the council could keep the amateurs informed on vital subjects. W9UFX, was appointed chairman for a committee to be set up to further investigate and arrange complete data for a state council. This committee will report at the next section meeting.

The subject of endeavoring to sponsor a bill in Wisconsin to allow the amateurs to use their call letters as license plates for their automobiles was brought up by W9QGG, Marinette EC. W9RUF informed the group that the MRAC has already gone into this matter and W9IZO, Tommy Gettleman, is handling this subject.

W9RUF, Ralph Koenig, EC for Milwaukee County and President of the MRAC gave a lengthy report on the EC group in Milwaukee. The emergency corp operates its own station W9IJT from the Red Cross building, who furnished money for the equipment. W9TQ is station manager.

The meeting lasted over two hours. A banquet followed, the attendance of which was 178.

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HALLICRAFTER MODEL S-37 AM-FM RECEIVER (Less Speaker)

130-210 Megacycles Sales Price - - - - \$ 169.50

Original Price \$591.75

HALLICRAFTER MODEL HT 17 TRANSMITTER 10-80 Meters

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C H I C A G O 6 , I L L I N O I S .

W9TNT

W9KIQ

W9LNZ

10 Meter INDUCTANCE TUNED FINAL AMPLIFIER.

By Bob Harkness - W9GZR.

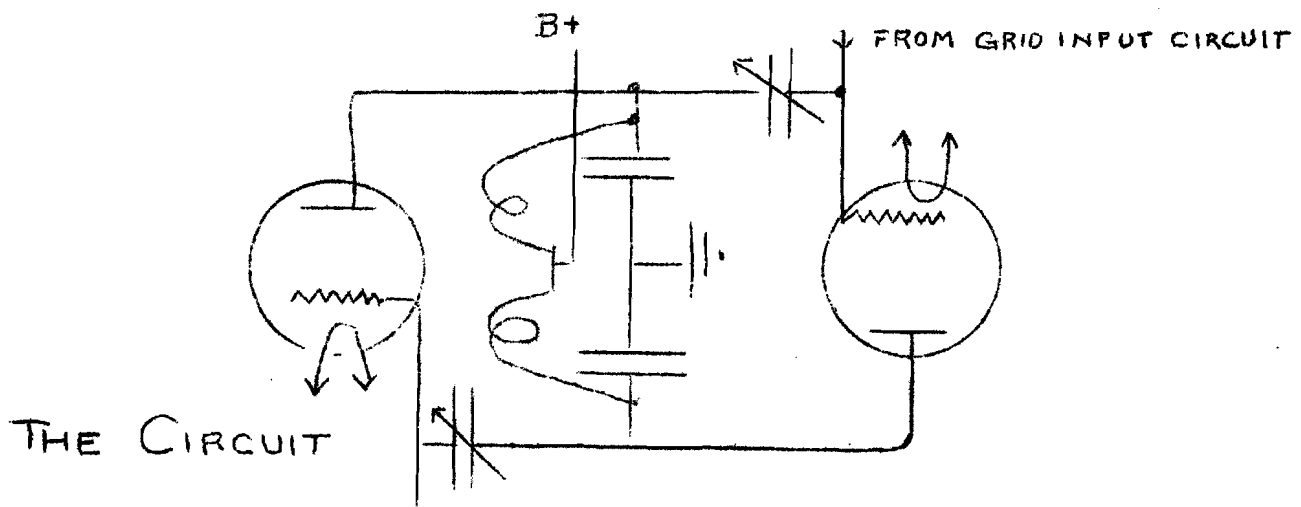
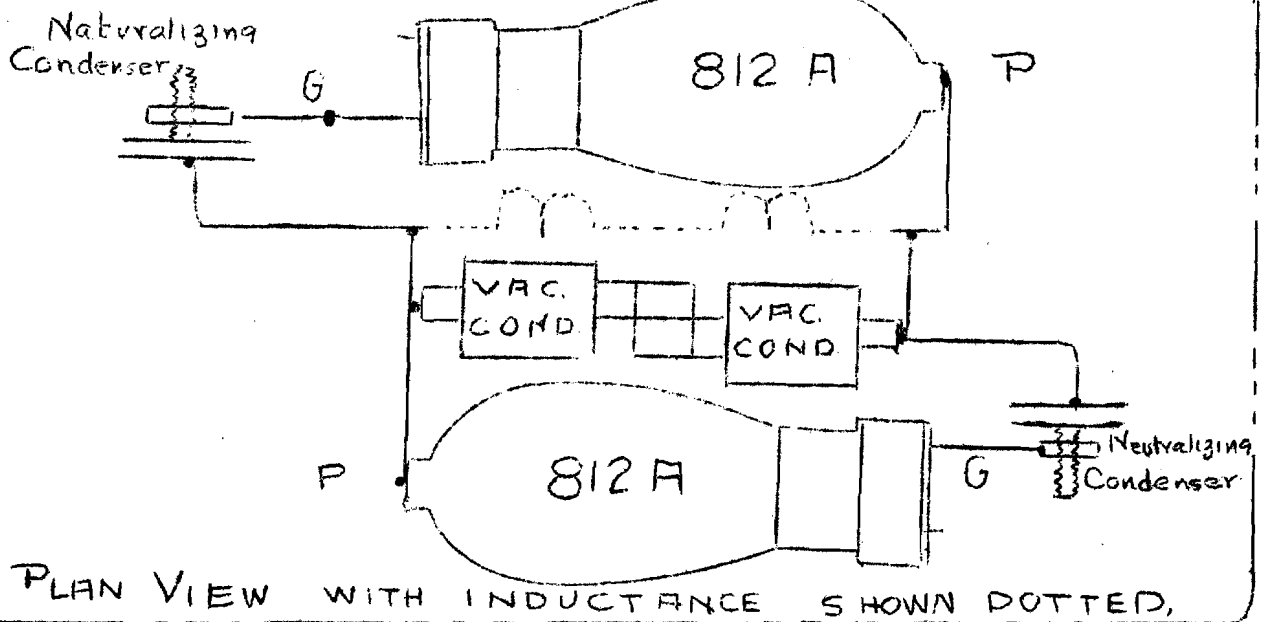
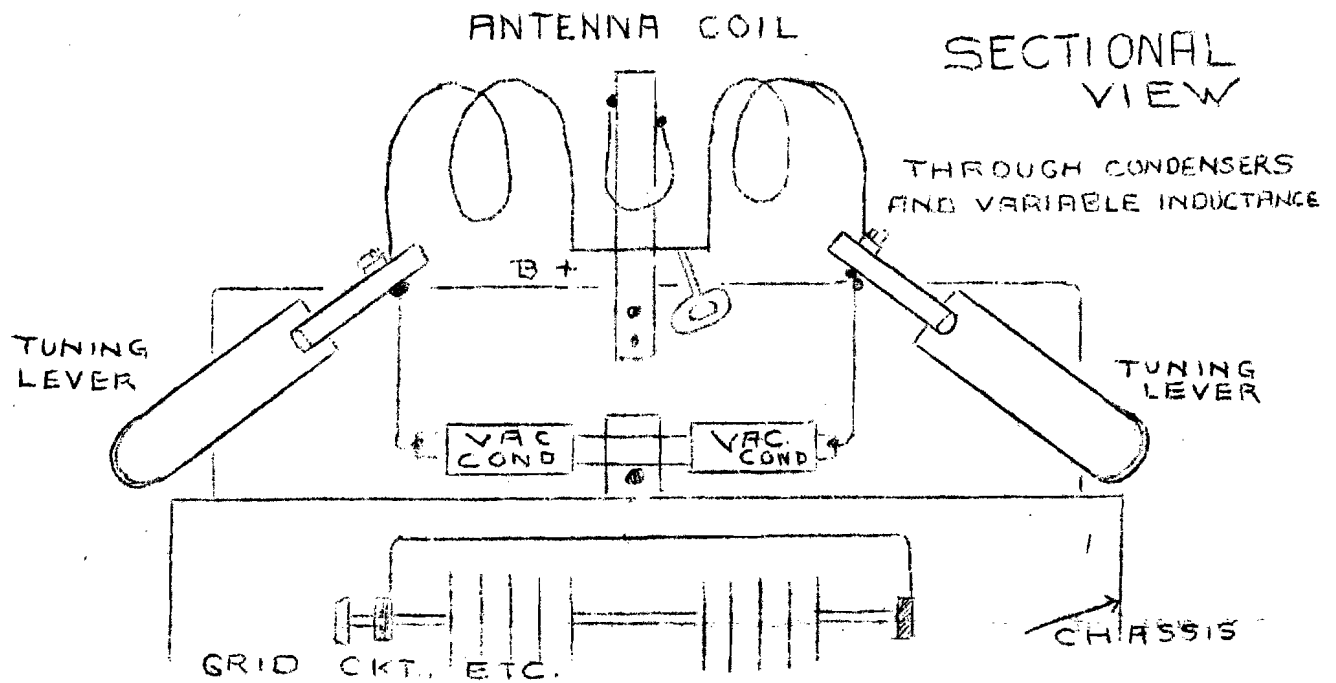
On two occasions I have wanted to build final amplifiers for amateur transmitters but have not felt like spending the money for the large variable tuning condenser usually required. It happened that vacuum condensers were available at a reasonable price, but of course, were of fixed capacitance. This suggested the idea of tuning with variable inductance so I decided to give it a try.

The first final built used a pair of 812 A's in push pull on ten meters, so that arrangement to give the shortest leads possible was important. To accomplish this, the tubes were arranged "head to toe", side by side, horizontally, with two 50 mmf vacuum condensers between them. The adjacent ends of the condensers were supported from and electrically connected to the chassis. The outer ends of the condensers were quite close to the plate lead on each end so were connected by flexible straps to the plate terminals of the tubes.

The variable inductance was mounted on a platform above the condensers. It consisted of four turns of copper wire about 1/8" in diameter, with an inside coil diameter of 2 1/8". The coil was anchored in the center to the B plus connection, supported from insulation on the platform. The ends of the coil were supported on pieces of mycalex attached to hinged brackets. The effect of tipping the brackets was to tip the end turns of the coil either toward or away from the center of the coil. This increased or decreased the effective length of the coil, thereby changing its inductance. Flexible straps connected the ends of the coil to the condenser terminals on each end.

To complete the design picture, the circular plate neutralizing condensers were mounted between each hot end of a condenser and the adjacent grid connection on the tube socket.

(See sketches on back)



NOTE: GRID DRIVE CIRCUIT NOT SHOWN FOR REASONS OF SIMPLICITY
TUNED GRID CIRCUIT WITH LINK COUPLING FROM DRIVER WAS USED.

160 Meter INDUCTANCE TUNED FINAL AMPLIFIER

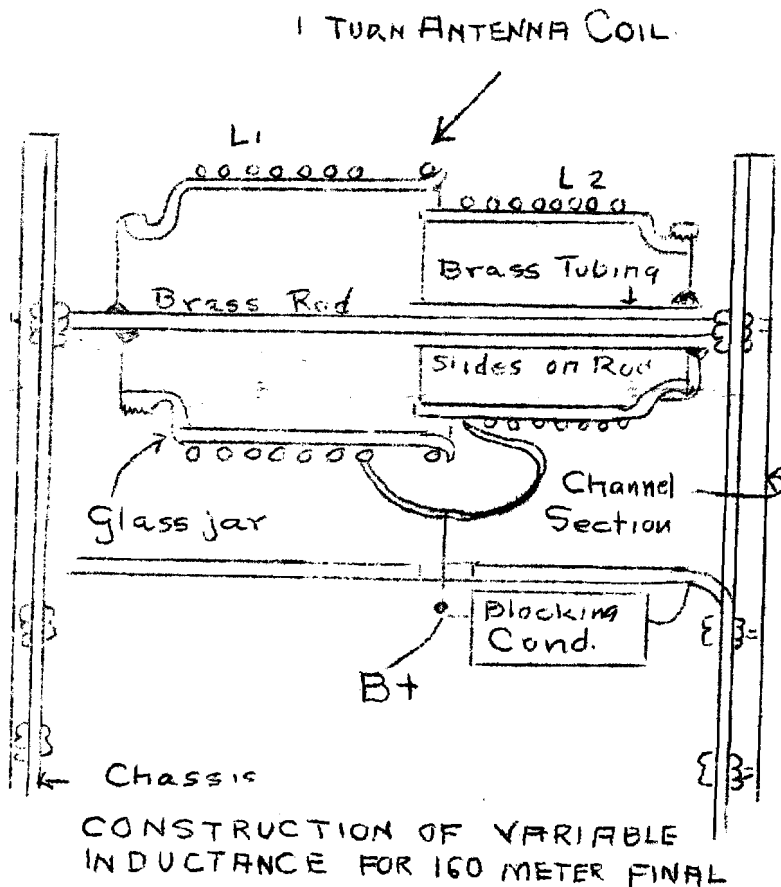
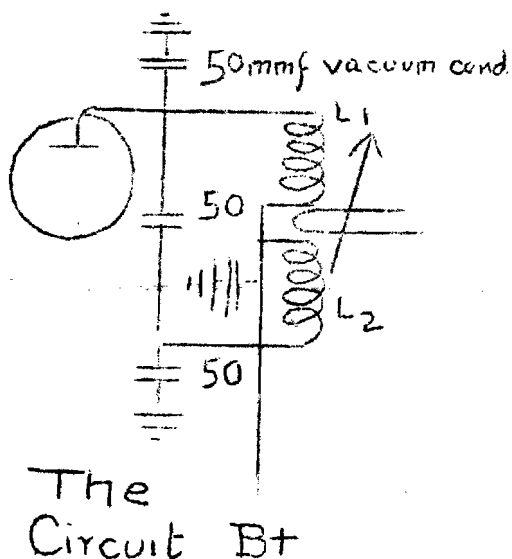
by Bob Harkness - W9GZR.

Results obtained lead me to believe that the efficiency is quite satisfactory. The tuning range is quite narrow and quite a bit of experimentation was required to get the right coil diameter.

The second final amplifier was for 160 meters and used a single 811. Again 50mmf vacuum condensers were used. In order to get enough capacity and to still get a reasonable balance each side of ground, one condenser was used across the full inductance and one more was used across each half of the inductance, with the common point of these two condensers grounded.

This time the two halves of the inductances were made concentric by winding each half on a glass jar with the bottom removed. The jars were supported from the lids in such a way that the smaller could be moved in and out of the larger. (see sketch). The coils were designed using handbook formulas to give equal self inductance in each half, which required more turns on the inner coil. Flexible leads were attached to the smaller coil so that it could be moved in and out of the larger.

Again results were quite satisfactory and in this case the tuning range was much greater.



W9RHH

WHY DON'T YOU JOIN ???

The MRAC promotes the hobby of amateur radio.

The MRAC joins with hundreds of other clubs to maintain our rights.

The MRAC meets every Thursday in a democratic manner.

The MRAC is going ahead.

Fill out the form below and send it to our membership chairman, Clarence Burke, W9KEU.

Dues are \$2.00 and initiating fees are 50 cents.

TEMPORARY APPLICATION BLANK FOR MEMBERSHIP IN
THE MILWAUKEE RADIO AMATEURS' CLUB, INC.

Date _____

To Membership Chairman,
Clarence Burke, W9KEU
5065 N. Elkhart Avenue,
Milwaukee 11, Wisconsin.

I hereby apply for membership in the Milwaukee Radio Amateurs' Club, Inc., and agree, if admitted to membership, to be governed at all times by the Corporation's Articles of Organization and By-Laws and by the rules and regulations of the Operating Department of the American Radio Relay League, Inc.

Name _____

Address _____

City _____

Call _____

Date joined A.R.R.L. _____

Age _____

U. S. Radio Operator's License, Class _____

How long have you been interested in Radio? _____

(After hearing from you, the regulation application blank will be mailed.)
